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4 September 1958

Andy *[initials]*Walt *WE*

MEMORANDUM FOR THE RECORD

SUBJECT: Destructor System

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1. On 19 through 22 August 1958, the undersigned visited Eglin Air Force Base, Eglin, Florida, to determine the problems involved in making the installation of the destructor system . The plane just arrived at Eglin for a 6 month testing program of the equipment on board.

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2. Several things were obvious from inspecting the plane which will affect the installation of the destructor system:

First, and most important, a decision will have to be made as to whether the installation is to be permanent and an integral part of the plane, or such that it can be removed after each flight. If the permanent installation is required, the first one will have to be made at where trained aircraft personnel can do the work according to standard procedures for stringing electric cable, etc. As shown in some of the following photographs, the plane is already extremely crowded with cables and equipment and the permanent installation will very definitely have to be custom tailored to the aircraft. From the installation at , a field modification kit would be made for the planes in the field.

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On the other hand, the temporary installation could be made directly (and almost immediately) in the field by anyone sufficiently familiar with the system. AMD will be contacted about this situation and hopefully tells us which approach they require.

The second point learned about that aircraft is that certain equipment and its location are in a state of flux. Most of the equipment will be given an evaluation during the 6 months at Eglin and may or may not still be on the plane at the end of this period. Several changes have already been made since the undersigned looked over the plane almost one year ago and a few more are already contemplated. System 3 was not on the plane and nobody at Eglin knew the schedule for it. Also one KD-2 camera has been removed and the other one will probably be replaced soon. The tape storage bin is no longer permanently mounted but slides into a chassis which is part of the plane.

The third point is that the Equipment Safeguard Unit (initiator for the destructor system) will most likely have to be mounted on the bulkhead just behind the copilot's head. (See Photo No. 1) of AMD gave his approval to this location.

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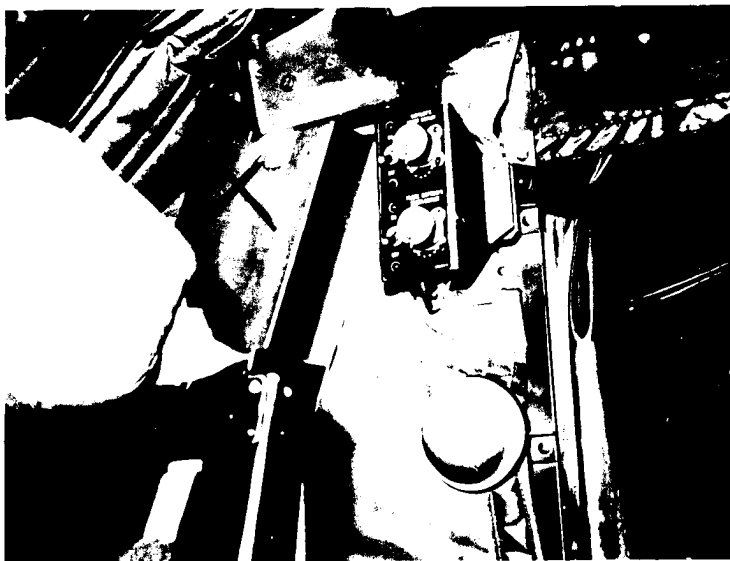


Photo No. 1
"X" indicates probable location of "Equipment
Safeguard Unit"

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3. A simulated installation was made to determine the approximate lengths of primacord and number of plastic connectors required. Also, the explosive containers were placed on the target equipment which was available to check clearances, etc. The only container which will need modification is the cross-shape charge for the Ampex 800 recorders.

The primacord and connector requirements for the plane as it is currently equipped are as follows:

2 Main Lines	:	151 feet
Total Branch Lines:		50 feet
Total	:	<u>201 feet</u>

Tees	:	16
Locking Nuts	:	32
Short Unions	:	15
Short End Caps	:	20
Long End Caps	:	13

The following approximate quantities are now stored at Ft. Belvoir:

Primacord		4000 feet
Elbows	:	275
TEES	:	450
Long Unions	:	285
Short Unions	:	380
Locking Nuts	:	2000
Webbed Unions	:	450
End Caps	:	1600
Long End Caps	:	380

Since the requirements for the planes in the field will be about five times those shown for one plane, there appear to be enough connectors on hand to perform the remaining testing.

4. Future tests will include:

- 1) Determining a satisfactory method of destroying the 35mm film magazine in the Automatic Log Recorder. (This will be installed on the plane in a few months).
- 2) Test of propagation along the main lines and branch lines.
- 3) Test the whole destructor system complete with mock-ups of the equipment placed approximately as they will be in the aircraft.

5. An effort is also being made to obtain [] which is ready to be scrapped. This plane would be used for the final mock-up test. [] of TSS/WAD is being contacted about obtaining the plane.

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6. The following photographs illustrate some of the problems which will be encountered in making a permanent installation:

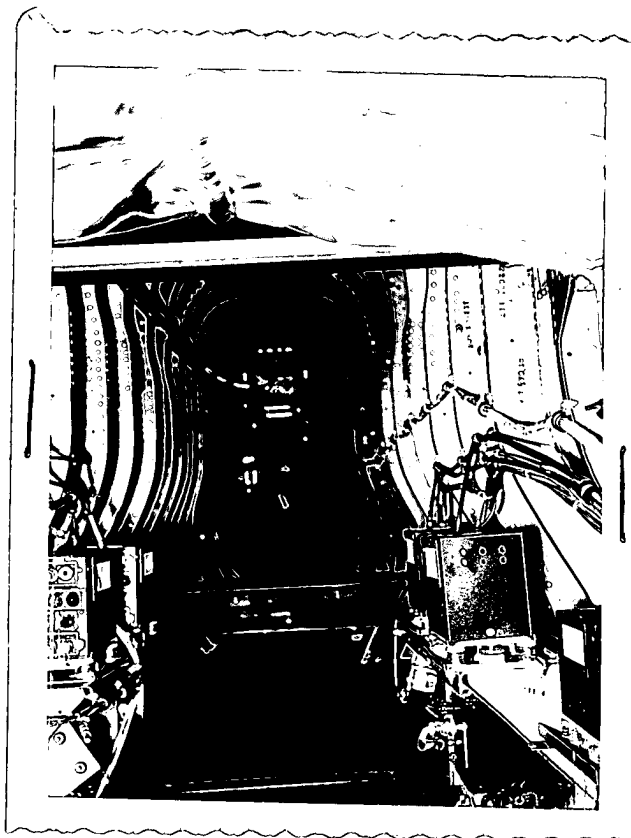


Photo No. 2

Looking aft towards the proposed System 3 location
and the 70mm camera mounting platform (lower foreground)

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Photos 3, 4, 5, and 6 show the maze of wiring and how it is strung:

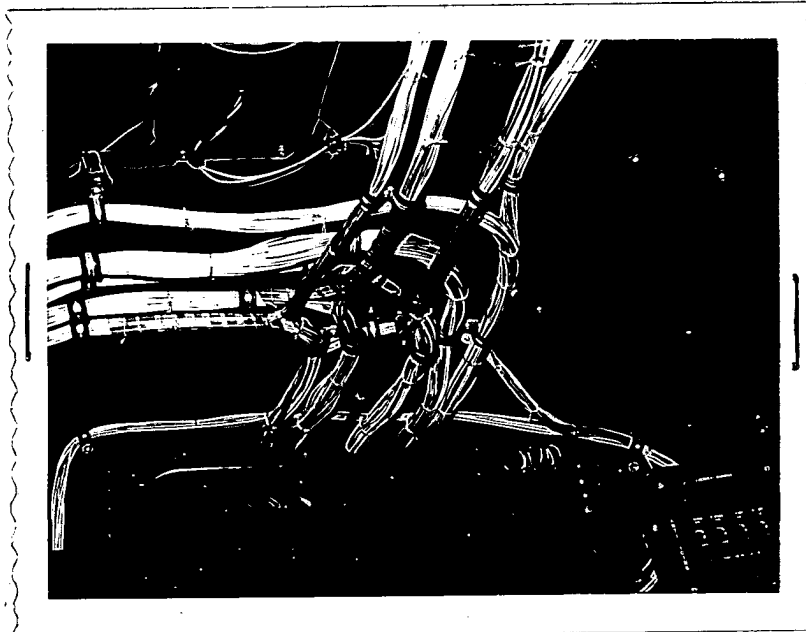


Photo No. 3
Wiring coming out of cockpit

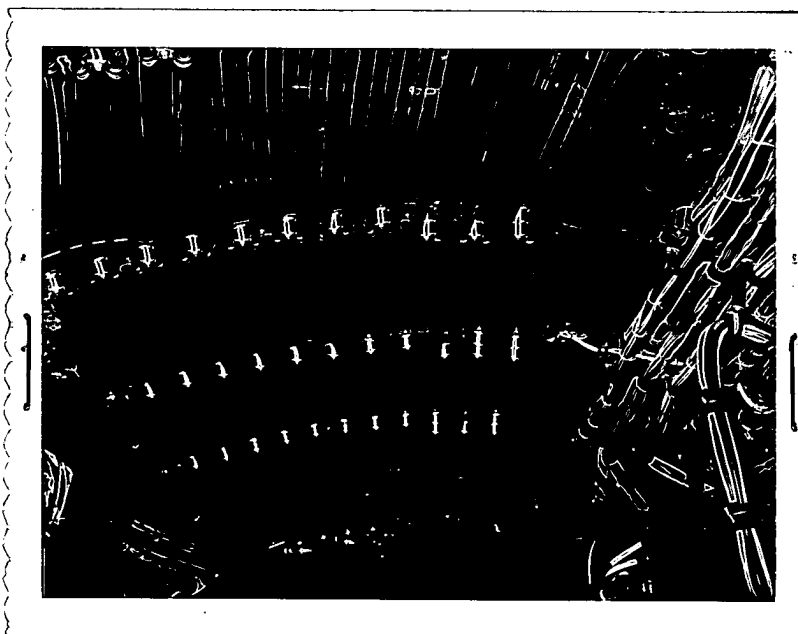


Photo No. 4
Wiring along top of fuselage near
Ampex 800's

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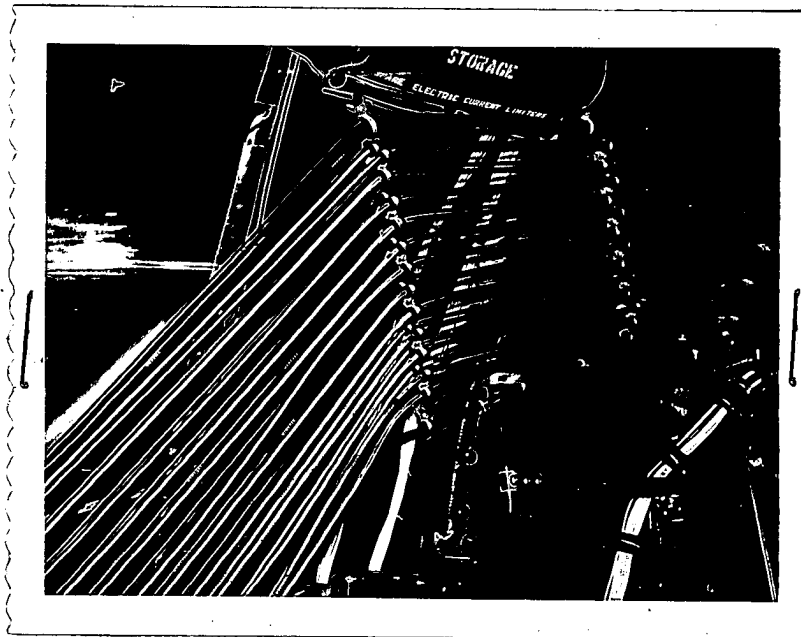


Photo No. 5
Maximum bend wiring experiences

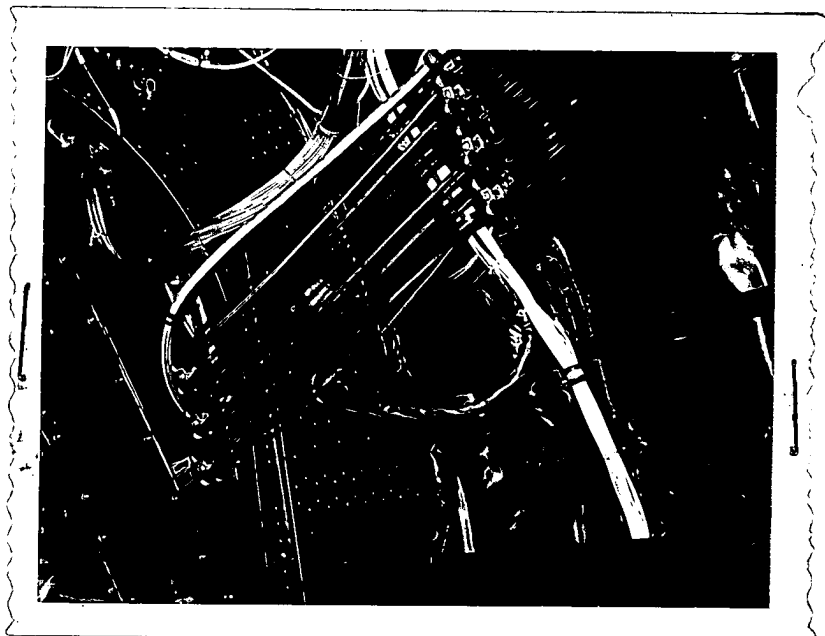


Photo No. 6
Wiring along side of fuselage

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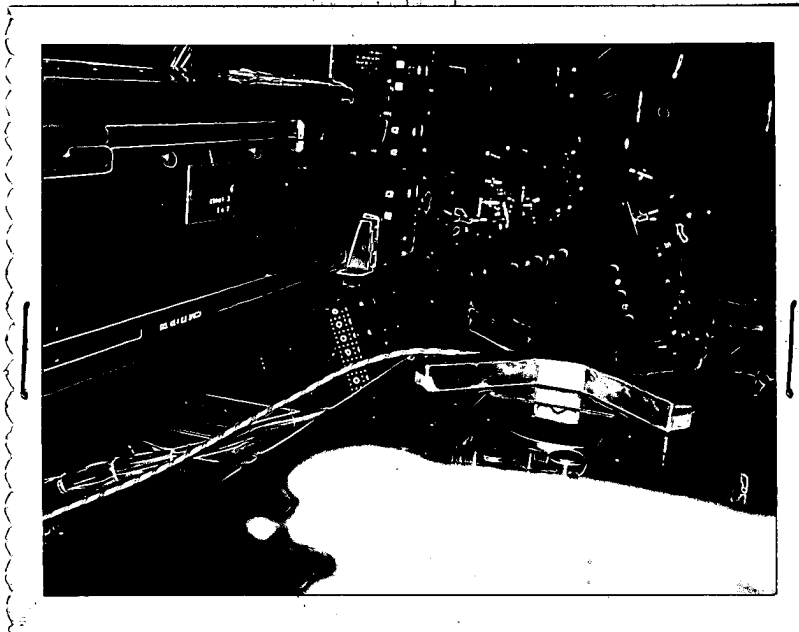


Photo No. 7
Ampex 800 pulled out in position to open
the lid. Shows cross-shape charge (placed
above take-up reel) and primacord branch
line going to main line

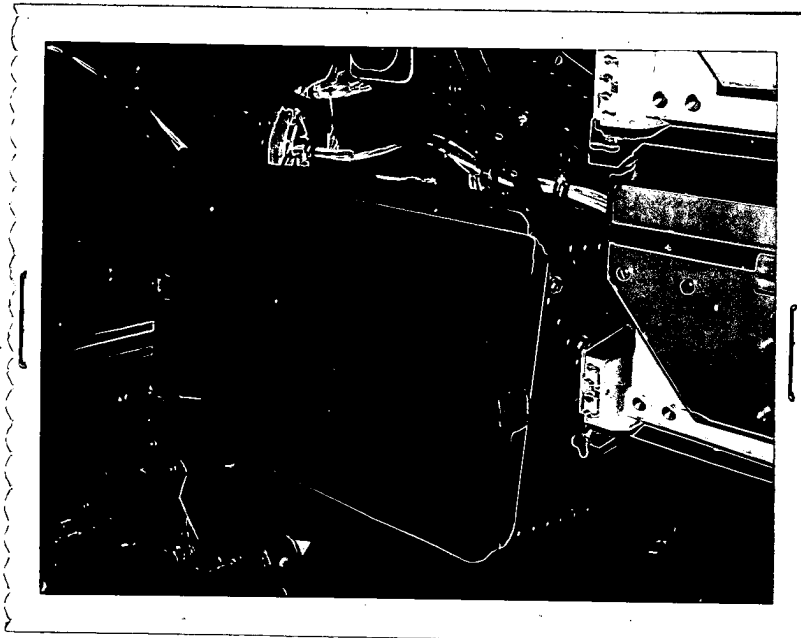


Photo No. 8
Housing for tape storage bin. (This may
be changed in the future)

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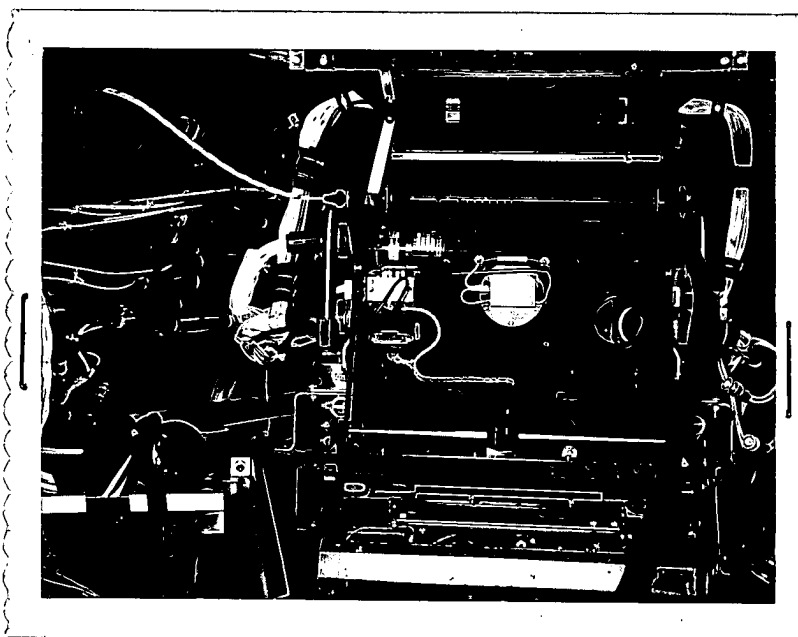


Photo No. 9
W-Developer showing modified take-up
film spool and method of connecting
primacord branch line

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